

4491

ANNUAL REPORT

OF THE

SCHOOL MEDICAL OFFICER

TO

The Education Committee

OF THE

SALOP COUNTY COUNCIL

1933.



WILLIAM TAYLOR, M.D., D.P.H.



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Medical Staff.

School Medical Officer :

WILLIAM TAYLOR, M.D., D.P.H.

Deputy School Medical Officer :

BERNARD A. ASTLEY WESTON, M.B., Ch.B., D.P.H.

Assistant School Medical Officers :

KATHLEEN PRIESTLEY, L.S.A.

MABEL BLAKE, M.B., Ch.B.

LESLIE WILSON EVANS, M.B., Ch.B., D.P.H. (part-time).

WILLIAM H. HARRIS, M.B., Ch.B., D.P.H. (part-time).

SIDNEY S. PROCTOR, M.D., D.P.H.

School Dental Officers :

STEPHEN KEENAN, L.D.S.

FRANK H. BIRCH, H.D.D., L.D.S.

GERALD R. CATCHPOLE, L.D.S.

Organiser of Physical Training :

MRS. K. W. DAVEY, Diploma of the College of Physical Education.

To the Chairman and Members of the Education Committee.

LADIES AND GENTLEMEN,

I have the honour to present the Annual Report on the School Medical Service for 1933.

The year has not been one in which there have been any new developments of an important nature, and the Report is largely indicative of the progress that has been made under the various schemes which have now been in existence for a number of years.

Matters of interest have been commented on in the Report, but special mention may be made here of the investigation carried out by the Dental Officers. This was undertaken in order to assist in an investigation suggested by Sir George Newman in his Report for 1931, with a view to determining the factors which contribute to immunity to dental caries. Some of the facts elucidated are of much interest, but further inquiry will be necessary before it will be possible to estimate their significance or to formulate definite opinions of a final nature.

I am, Ladies and Gentlemen,

Your obedient Servant,

WILLIAM TAYLOR,

*County Medical Officer and
School Medical Officer.*

COLLEGE HILL HOUSE,
SHREWSBURY,
May, 1934.

AREA COVERED BY THE SALOP EDUCATION AUTHORITY, NUMBER OF SCHOOLS, DEPARTMENTS, AND CHILDREN ON REGISTER.

The area covered by the Salop Education Authority comprises 858,277 acres, and at the time of the 1931 Census had a population of 211,784. With the exception of the area represented by the Borough of Shrewsbury, which is an independent authority for elementary education, it is co-extensive with the administrative county.

At the end of the year there were 320 departments, comprised in 274 schools. On 31st December, 1932, the number of children on the register was 30,144, as opposed to 30,395 on 31st December, 1933.

STAFF.

Since the issue of the last report there has been no change in the personnel of the Medical and Dental Staffs which consist of six Assistant School Medical Officers (two of whom hold positions of District Medical Officers of Health within the County), and three whole-time Dental Officers. Seven-tenths of the time of the Assistant Medical Officers is devoted to the work of School Medical Inspection, the remainder being given to other branches of the health services.

In addition to the Assistant Medical Officers and Dental Officers above mentioned, there are—

- 3 Dental Helpers.
- 1 Organiser of Physical Training.
- 2 Whole-time School Nurses.
- 10 Health Visitors undertaking school nursing.
- 89 District Nurses undertaking school nursing.

CO-ORDINATION.

Every effort is made to link up the various health services in the County, so that they may form a complete and co-ordinated whole. This is achieved to a very great extent by the arrangement under which the areas for which the Assistant School Medical Officers are responsible are, as far as possible, made the same as those for which they act in their capacity of Assistant Maternity and Child Welfare Medical Officers. The children whom they see at the Welfare Centres under the Maternity and Child Welfare Scheme are, later, the same children whom they examine in the schools, and sometimes treat for minor ailments in the school clinics, which are also held in the Child Welfare Centres. In addition, the Orthopaedic Clinics, fifty per cent. of the attendances at which are made by school children, are held, with two exceptions, in the same building and on the same day as the Child Welfare Centres. As the co-operation between the Assistant School Medical Officers and the Orthopaedic Surgeons who attend these clinics is very close, a further linking up of the health services is thus secured. As a child attending any of these clinics can be referred for examination to the Tuberculosis Medical Officers, who keep such children under supervision where considered necessary, and carry out re-examination when it is found desirable, it will be obvious that the various services affecting school children are very closely linked up. A further co-ordination is secured in the arrangement by which two of the Assistant School Medical Officers are also District Medical Officers of Health; and as this is one which assists very materially in the control of outbreaks of infectious disease, it is hoped that it will be found possible further to extend such arrangements.

HYGIENIC CONDITION OF THE SCHOOLS.

The Assistant School Medical Officers are responsible for the sanitary supervision of the schools which they inspect, and are required to make a report on any unhygienic conditions which they find. This is work of fundamental importance, both from an educational and hygienic point of view, and matters requiring to be dealt with are referred to the Secretary for Education. In a rural county, such as Shropshire, it is of course quite impossible to attain anything like uniformity of standard in the various schools, situated as they are both in urban and rural districts, and consequently varying greatly in size. It should be recognised, however, that many of the older schools fall far short of what is required in the matter of lighting, heating and ventilation, and that the nature of the sanitary conveniences provided in certain instances is only partly justified by the limitations imposed by the absence of public services in the localities in which the schools are situated.

Ceiling Heating.

The two new schools in which ceiling heating has been installed have been the subject of special observation, and although the results obtained in comparatively mild weather leave little to be desired, there is some difficulty in securing an adequate temperature in the classrooms when the weather is really severe. Observation has shown that while the heat generated is probably ample, too much of it is finding its way into the space between the roof and the ceilings of the class-rooms. This is due partly to insufficient insulation and partly to the hot pipes not being near enough to the radiating surface, faults which could be overcome without difficulty in future installations. *The matter is one worthy of careful consideration by the Works Committee as, if schools are to be constructed on the open-air principle, as they should be if the maximum amount of open-air education is to be secured, only by this method of heating is it likely to be possible to keep the children comfortably warm except under very mild weather conditions.*

Of course, the most satisfactory results are likely to be obtained by a combination of different methods of heating, but financial considerations practically preclude such a possibility; and in a room in which the atmosphere is being changed frequently, as must be the case where the whole of one side of the class-room is thrown open to the outside air, the best results should be achieved with radiant heat, the source from which it is obtained being situated in the ceiling.

In the Annual Report for 1932, Dr. Weston, Deputy School Medical Officer, dealt in a comprehensive manner with the various methods of heating in the schools generally, and his comments on the relative merits of the different systems are deserving of careful consideration.

Meals for School Children.

The health of the children is likely to be improved by arrangements whereby a really good meal can be provided in the school during the middle of the day, and at the present time the problem of how to do this is being dealt with in individual schools to varying extents by different methods. The number of schools in which a good, hot meal is provided is not large, but in many schools something is being done as a result of the initiative of the head teachers, and full credit and every encouragement should be given to those who try to provide for the needs of the children in this respect.

Milk.

In 43 schools a regular supply of milk is now being provided in bottles containing a third of a pint at a cost of 1d. This is usually consumed in the middle of the forenoon, and as milk is the very best form of food obtainable, the needs of the children are up to a point met in this way. In a larger number of schools a hot drink, usually consisting of cows' milk modified in some way and sold under a trade name, is given to the children. Although this last is all to the good and many children prefer such a drink to one consisting entirely of cows' milk, it ought to be clearly

understood that the chief nutritive value of these preparations lies in the cows' milk which they contain. As, however, pure milk is the most nutritious form of food obtainable, when a satisfactory supply can be provided for the children its consumption should be encouraged rather than that of some modified form of it. *The purchase of cows' milk in modified form is an expensive and uneconomic method of obtaining it.*

It is sometimes stated that milk consumption is not altogether free from danger, in that it is a potential vehicle for the conveyance of various forms of infection. Although this is true it is not justifiable to adopt a purely negative attitude, and one must either condemn or recommend it. Its value as a food has been abundantly established, and however unsatisfactory it may be that an absolute guarantee with regard to any milk cannot be given, the fact remains that the value of milk as a food makes it impossible to find any satisfactory substitute for it.

The Local Education Authority is taking every opportunity of encouraging the consumption of milk by school children, but *it ought to be understood that, if the consumption of milk is to be encouraged, the farmers must do their utmost to give a sound, clean article in return.* Milk is recognised as one of the ways by which tuberculosis can be spread, and, as health authorities cannot wholeheartedly encourage its consumption unless the producer takes every step to ensure that it is a safe food for the child population, the question arises whether the Local Education Authority ought not to disapprove of milk supplied to children during school hours which does not carry with it some such guarantee of safety and cleanliness.

The arrangements for securing a daily supply of milk to the schools is left to the Head Teachers, who are not, of course, in a position to know whether the milk provided is of a satisfactory standard of cleanliness. It is not too much to ask the farmers who supply the milk to guarantee that it is at least of Grade A standard in this respect, and it is hoped to obtain this guarantee by securing that all producers of milk who supply the schools will either be holders of a licence to produce a graded milk, or that they will be on the Accredited Milk Producers' Register of the Agricultural Department. Unfortunately the number of farmers whose names are on the Accredited Milk Producers' Register is not sufficiently large to enable the Head Teachers to arrange in all cases for the milk supplied in the schools to be obtained from such a source, and arrangements have now been made for the sampling and examination from time to time of milk supplied to schools under this scheme.

EDUCATIONAL WORK OF MEDICAL OFFICERS AND OTHERS.

In addition to the instruction which the children receive from the teachers in health matters as part of the school curriculum, addresses are given by the Assistant School Medical Officers when they visit the schools if time and opportunity allow. This important branch of the work is capable of much further development.

Summary of Assistant Medical Officers' Addresses to School Children.

				1933	1932
Dr. Blake	..	..	..	61 lectures.	36 lectures.
Dr. Harris	..	..	..	11 „	18 „
Dr. Priestley	..	..	..	16 „	11 „
Dr. Proctor	..	..	..	9 „	9 „
Dr. Weston	..	..	..	8 „	12 „
*Dr. Evans	..	..	..	1 lecture.	1 lecture.
Total number of lectures				106	87

* Lecture on "Essentials of Health" at 20 schools during Oswestry Health Week.

FINDINGS OF MEDICAL INSPECTION.

During the year, 171 schools were visited once only, 126 twice, and 26 three times. This represents a total of 501 medical inspections as opposed to 508 during the previous year. Although seven fewer medical inspections were carried out, there was an increase of 567 in the number of children who underwent routine examination.

The following are particulars of the number of children who underwent medical examination by the Assistant School Medical Officers :—

		Routine Examinations.			Special	Re-examinations.	Total.
		Aged 5.	Aged 8.	Aged 12.	Cases.		
Dr. Harris ..	..	552	508	463	171	2,482	4,176
Dr. Blake ..	..	636	641	677	214	2,158	4,326
Dr. Weston ..	..	590	646	637	132	1,457	3,462
Dr. Priestley ..	..	497	455	616	39	2,311	3,918
Dr. Proctor ..	..	778	829	790	155	1,432	3,984
Dr. Evans ..	..	474	473	498	106	850	2,401
Totals for 1933 ..		3,527	3,552	3,681	817	10,690	22,267
Totals for 1932 ..		3,371	3,496	3,326	843	11,019	22,055

The apportionment of the children amongst the nurses is as follows :—

District Nurses acting as School Nurses (86)	..	..	16,535
Whole-time School Nurses (2) .. ..	..	..	5,211
Health Visitors (10) .. ..	..	..	6,518
Nurses working on their own account (2) ..	..	..	2,057
Health Visitors and District Nurses jointly (7)	..	..	182

Pediculosis.—Although this branch of the school medical service is peculiarly that of the school nurses, it is convenient to include it under the findings of the school medical inspection work.

The instructions given to the school nurses are to examine the heads of the children each term, and to follow up the verminous children by making subsequent inspections in order to get them clean before the end of the term, and there are thus three primary inspections in each year.

It is the policy to give every assistance and advice before prosecuting, and summonses are only issued as a last resort, but proceedings in connection with the radically verminous children who are the source of the trouble, should be *commenced at the beginning of the term*, instead of waiting until the third inspection, as these children should now be well known.

There can be no doubt, however, that prosecutions are an essential part of any scheme for getting the children's heads clean, and legal proceedings were taken in 18 cases during 1933, and in 5 cases during the previous year, fines ranging from 5/- to 10/- being imposed.

During the year the percentage of children found verminous on primary inspection was 4.3, a decrease of 0.1 per cent. on the previous year. The percentage of verminous heads for 1933 is therefore the lowest which has yet been recorded, but as the following particulars show, little progress has been made during the past three years, and unless energetic measures are adopted to eradicate verminous conditions amongst school children, at the present rate of progress a period of over 40 years must elapse before those parents who send their children to school in an unclean condition can be made to take the steps which health and hygiene require.

Year	Percentage verminous.	Year	Percentage verminous.
1920	14.0	1931	4.5
1925	7.5	1932	4.4
1930	4.9	1933	4.3

The following are the particulars of the primary and following-up inspections during the years 1932 and 1933 :—

		Primary Inspections.	No. of Children.	No. Verminous.	Percentage Verminous.
1932	.. ..	1142	88030	3856	4.4
1933	.. ..	1135	89794	3853	4.3

Below are details of the findings at subsequent inspections in the case of those found verminous at the first inspections :—

			No. verminous at inspections.			
No. of following-up inspections.			Second.	Third.	Fourth.	Fifth.
1932	..	1602	2101	640	184	32
1933	..	1731	2082	827	297	85

Defects of Nose and Throat.—Of the 10,760 children belonging to the code groups who were examined, 412 or 3.8 per cent. required treatment on account of diseases or defects of the throat and nose. Inclusive of special cases, there were in all 1,412 children who were found at medical inspections during the year to be suffering from defects of the throat and nose, of whom 462 required treatment, 950 being kept under observation. Of those recommended for treatment, some required removal of tonsils only, others of adenoids, and some of both. The following are the particulars :—

		Tonsils only.	Adenoids only.	Tonsils and Adenoids.	Total.
1929	..	576	94	388	1058
1930	..	529	70	368	967
1931	..	607	73	439	1119
1932	..	342	53	235	630
1933	..	223	54	157	434

Tuberculosis.—Cases of tuberculosis amongst school children are discovered by the Medical Inspectors, either in the course of ordinary routine inspection or by the examination of cases specially referred to them by teachers or school nurses. In addition, all school children who come from homes in which a case of phthisis has been diagnosed are the subject of special examination at each medical inspection. Of 563 children from phthisis homes, 461 were examined by the medical inspectors, and 9 suspected cases were referred to the Tuberculosis Medical Officers for further examination.

The particulars regarding the total number of school children referred to the Tuberculosis Medical Officers from all sources during the year are as follows :—

			Pulmonary Tuberculosis.			Other forms of Tuberculosis.		
			No physical signs.	Sus-pected.	Diag-nosed.	Diag-nosed.	Sus-pected.	
New Cases	169	101	12	7	38	11
Cases from previous year	38	7	..	4	27	..

Ringworm.—When authorised by the School Medical Officer, children suffering from ringworm are now admitted to school, if the parent undertakes to carry out certain stringent precautions. It is also an essential condition of admission that the teacher shall undertake to see that the precautions are carried out.

Of the children examined by the Medical Inspectors, 4 were found to be suffering from ringworm of the scalp, and 32 cases were notified by the teachers, although these were not usually based on medical opinion.

Eye Defects.—There were 584 children with defective eyesight or squint requiring treatment, and 139 with lesser degrees of defect that needed to be kept under observation. Of the children requiring treatment, 507 belonged to the code groups, and 77 were special cases. As children aged 5 are not systematically examined for defective eyesight, the code group cases are mostly aged 8 and 12, and the percentage amongst these children needing treatment was 6.1.

The following table shows the percentage of children at the age of 12 requiring treatment for eye defects since the war :—

Year	Percentage of defects.	Year	Percentage of defects.
1919	10.0	1926	7.3
1920	10.2	1927	7.9
1921	8.5	1928	8.1
1922	7.6	1929	9.0
1923	7.5	1930	8.9
1924	8.2	1931	6.5
1925	7.9	1932	7.0
		1933	6.1

Ear Disease and Hearing.—Experience has shown that a large number of cases of deafness and otorrhoea are due to an attack of an acute infectious disease, such as measles or scarlet fever, or to throat affections, but especially to the presence of unhealthy tonsils and adenoids. Fifty-three routine cases and 8 special cases were referred for treatment either on account of deafness or otorrhoea, or both. The figures for the previous year were, 35 routine cases and 16 special cases.

Dental Caries.—The following tables show percentages of dental caries at the various age periods amongst the children examined. These percentages of decayed teeth found by the School Medical Inspectors correspond fairly closely with those given by the School Dental Officers.

RESULT OF ROUTINE INSPECTION BY THE MEDICAL AND DENTAL OFFICERS.

	Age 5.			Age 8.			Age 12.		
	No. of children Examined.	Average No. of decayed teeth per child.	Percentage of children free from caries.	No. of children Examined.	Average No. of decayed teeth per child.	Percentage of children free from caries.	No. of children Examined.	Average No. of decayed teeth per child.	Percentage of children free from caries.
Dr. Blake	432	4.3	20	610	4.0	12	699	1.7	31
Dr. Evans	357	3.0	30	418	2.3	29	474	1.4	39
Dr. Priestley	431	5.2	13	432	4.0	9	627	1.8	30
Dr. Weston	356	4.3	17	522	4.9	7	575	1.7	36
Dr. Harris	461	3.1	25	484	2.4	22	455	1.2	44
Dr. Proctor	497	3.0	28	621	2.4	24	647	1.4	41
	2534	3.8	22	3087	3.4	17	3477	1.5	36
Dental Officers		4.0	18		3.3	11		1.8	25

The following table gives in detail the results of inspection by the School Dental Officers of children of all ages :—

Age	Under 5	5	6	7	8	9	10	11	12	13	14
Average number of teeth decayed ..	3.3	4.0	3.9	3.7	3.3	2.8	2.3	1.9	1.8	1.9	2.2
Percentage of children free from caries ..	30	18	10	10	11	12	17	21	25	24	22

In stating the average number of teeth decayed, extracted and filled teeth are counted as decayed teeth. These figures therefore, do not give quite an accurate representation of the actual condition of the mouths of the children, inasmuch as a child's mouth usually has been put into an absolutely healthy and satisfactory condition by means of extractions and fillings, yet each of these has, for statistical purposes, been counted as a tooth showing dental caries. It will be observed that between the ages 5 and 12 the average number of decayed teeth per child gradually diminishes and that the percentage of children free from active caries steadily increases between the ages of 7 and 12.

Average number of decayed teeth per child found by the Medical Inspectors in the years 1919—1932 :—

Year		Age 5.	Age 8.	Age 12.
1919	..	2.1	3.6	2.1
1920	..	2.16	3.8	2.1
1921	..	2.5	3.5	1.9
1922	..	3.0	3.6	1.7
1923	..	3.4	3.6	1.7
1924	..	3.0	3.3	1.6
1925	..	3.1	3.4	1.6
1926	..	3.0	3.3	1.5
1927	..	2.7	3.4	1.6
1928	..	2.8	3.1	1.5
1929	..	2.9	2.8	1.5
1930	..	3.2	2.7	1.8
1931	..	3.8	3.1	1.6
1932	..	3.7	3.1	1.5
1933	..	3.8	3.4	1.5

Investigation of factors contributing to Immunity to Dental Caries.

In "The Health of the School Child, 1931," Sir George Newman suggested that in the year now under consideration an investigation into the question of dental caries should be carried out. Most investigations so far have been undertaken with a view to determining the cause of dental caries, but Sir George Newman suggested that in this instance the inquiry should be directed towards determining the factors which secure immunity to caries.

In order to make the inquiry a practicable possibility, it was suggested that it be limited to children aged between 12 and 13 years, that a record be kept of all children in that age group examined in 1933 who were naturally free from caries, and that the homes of these children be then visited by the School Dental Officers with a view to ascertaining the home circumstances, their habits of life, their dietary habits and the condition of the teeth of the parents, brothers and sisters, etc. The results of this inquiry, which was carried out very carefully by the School Dental Officers, are set out on page 11. It is to be noted that the term "naturally free from caries" applies only to those children concerning whom there is no record or history of their ever at any time having suffered from any dental decay, either of the temporary or permanent teeth. If, therefore, any child had such a history or record of dental caries, such child was excluded from the inquiry, even if at the time of the examination there were no signs of dental caries and no evidence of ever having had dental treatment.

It has not so far been possible to go fully into the facts elucidated with regard to these children, and therefore to draw conclusions from them; and although they are of great interest they will only be superficially commented upon at present. The summary given on page 10 indicates the directions in which there will have to be a further sorting out of the facts ascertained, and it is hoped that by the time of issue of the next Annual Report it will be possible to state more precisely any conclusions which it may be possible to draw. This will involve a large number of cross-references in order to ascertain the factors which have contributed to the groupings of the children given in the table. The following comments may, however, at present be made.

The home circumstances of the children found to be naturally free from caries were "working class." These have been divided into "good" and "poor," and 58 per cent. of the children came from poor homes, and 42 per cent. from good homes. Poor homes, therefore, would seem to favour good teeth, a result doubtless due to dietary habits.

As regards locality, only 27 per cent. were town children and 73 per cent. were country children. Inquiry will have to be made into the distribution of the general population between town and country, and roughly speaking in this county the population is about equally divided between the two. It would appear, therefore, that the teeth of town children are much more affected by caries than those from the country.

An outstanding result of the inquiry is that 98 per cent. of the children found to be naturally free from caries have normal dental occlusion. It is obvious that normal dental occlusion must make it a comparatively easy matter to keep the teeth clean, and this fact lends support to the theory so strongly held and so consistently taught in this county for a long number of years, namely, that the chief and, for practical purposes, the only cause of dental caries is dental uncleanness. What has yet to be determined are the various factors which bring about normal dental occlusion.

Although 74 per cent. of these children were breast-fed and 25 per cent. were artificially fed, this finding is merely in accordance with the distribution of these forms of feeding in this county during the first nine months of life.

The "dummy," although it ought of course on hygienic grounds to receive unqualified condemnation, would not appear to have the disastrous effects on dental occlusion which are usually attributed to it. It was used by 50 per cent. of these children.

The only comment which is now made with regard to milk is that it is rather remarkable that, as high as 34 per cent. of these children appear to have taken it after boiling. There is room for inquiry as to what is understood by boiled milk in this case.

Although 71 per cent. drank hard water, probably this is in accordance with the nature of the water available for the population as a whole, and has no direct relationship to immunity to dental caries. Certainly the effect of hard water would be much less than that of foods rich in minerals, such as milk and vegetables, and as large a proportion as 78 per cent. of these children had vegetables daily. As vegetables ought to be included in every diet, it is possible that their chief significance is that of good management in the home, a *sine qua non* of freedom from dental caries. It is interesting on general grounds to note, however, that the percentage of children in whose homes there were vegetable gardens is practically the same as the percentage of children having vegetables daily.

The figures relating to cod liver oil, butter, margarine and lard would not seem to lend support to the current theory of the relationship of fat soluble vitamins to dental caries.

As regards the influence of heredity, the findings relating to fathers, mothers, brothers and sisters do not seem to indicate that it has any pronounced significance; and the fact that as many as 45 per cent. of the mothers and only 29 per cent. of the fathers had good teeth is contrary to the theory commonly held that pregnancy has a very injurious effect on the teeth. The relationship of mothers to fathers in this matter appears to be the same as that of sisters to brothers, and is probably a result of greater attention being given to the care of the teeth in the matter of dental hygiene by the female side of the household.

PARTICULARS RELATING TO CHILDREN, OF THE AGE 12 TO 13 YEARS, NATURALLY FREE FROM DENTAL CARIES.

No. of children inspected of the age 12 to 13 years 3,225

No. of these children naturally and entirely free from dental caries 93 or 2.9 per cent.

(The findings of the Dental Officers which are summarised below are expressed in the form of percentages of the data obtained) :—

Home circumstances	..	Good	..	41.9	Poor	..	58.1
Locality	..	Town	..	26.9	Country	..	73.1
Dental Occlusion	..	Normal	..	97.8	Abnormal	..	2.2
Infant feeding	..	Breast	..	74.2	Artificial	..	25.8
"Dummy"	..	Used	..	49.5	Not used	..	50.5
Milk	..	Regularly	..	49.5	Occasionally	..	50.5
* Milk	..	Raw	..	62.5	Boiled	..	34.4
Water	..	Hard	..	70.7	Soft	..	29.3
Vegetables	..	Daily	..	78.5	Occasionally	..	21.5
Vegetable garden	..	With	..	76.3	Without	..	23.7
Protein	..	High.			Normal.		Low.
	..	1.1			72.8		26.1
Carbohydrates	..	35.5			61.3		3.2
Eating of sweets	..	Regular.			Occasional.		Normal.
	..	8.7			65.8		25.5
Brushing of teeth	..	44.1			38.7		17.2
Cleansing Food	..	18.3			57.0		24.7
Cod Liver Oil	..	5.4			34.8		59.8
Butter	..	16.1			62.4		21.5
Margarine	..	5.4			41.9		52.7
Lard	..	11.8			62.4		25.8

PHYSIQUE OF THE CHILDREN.

Good 50.

Average 43.3

Poor 6.7.

NEAR RELATIVES.

		Good Teeth.	Average Teeth.	Poor Teeth.
Fathers (84)	..	28.6	27.4	44.0
Mothers (87)	..	44.8	27.6	27.6
Brothers (193)	..	73.6	21.2	5.2
Sisters (171)	..	83.1	14.6	2.3

* The remaining 3.1 per cent. had Pasteurised Milk.

Crippling Defects.—The numbers of these defects found at the routine medical inspections were :—rickets 45, spinal curvature 51, other forms 224. Probably the most common of school deformities are knock knee, flat foot and spinal curvature. A very close relationship has been observed between these conditions, often all found in the same child, and the presence of unhealthy tonsils and adenoids.

The cases of school children admitted to the Robert Jones and Agnes Hunt Orthopaedic Hospital have been analysed in accordance with causation, and show that :—

21 cases or	20.6	per cent.	were due to	Tuberculosis.
16	„	15.7	„ „ „	Fractures and Dislocations.
12	„	11.7	„ „ „	Nerve Disease and Injuries.
9	„	8.8	„ „ „	Osteomyelitis.
8	„	7.8	„ „ „	Claw Foot.
7	„	6.9	„ „ „	Flat Foot.
6	„	5.9	„ „ „	Spinal Curvature—Non-tubercular.
6	„	5.9	„ „ „	Arthritis (Septic and Rheumatoid).
5	„	4.9	„ „ „	Congenital Deformities.
5	„	4.9	„ „ „	Conditions due to faulty footwear.
2	„	2.0	„ „ „	Club Foot.
2	„	2.0	„ „ „	Rickets.
1	„	1.0	„ „ „	Torticollis.
1	„	1.0	„ „ „	Diseases of the Hip—Non-tubercular.
1	„	1.0	„ „ „	Injuries to hands.

This classification of cases in accordance with causation is extremely instructive, as most of the conditions here mentioned are comparatively easily cured if got under treatment at the very beginning of the disease. It is particularly important to obtain early treatment for cases of poliomyelitis, rickets, congenital deformities and tuberculosis. Many of the tuberculous cases come under notice after considerable damage has been done, the cause of the trouble not having been recognised in the early stages. The paralytic conditions arising from childbirth are possibly also largely preventable.

Goitre.—In Shropshire simple goitre is not common amongst school children, but it is more common in girls than in boys, especially in the later years of school life.

		Boys.			Girls.			Total.
		Entrants.	Inter.	Leavers.	Entrants.	Inter.	Leavers.	
No. of children	..	1791	1782	1914	1736	1770	1767	10760
Cases of goitre	..	0	3	8	1	5	27	44

Dull and Backward Children.—The examination and re-examination of cases of retardation amongst school children takes up a very considerable amount of time of the School Medical Inspectors, especially when the question of certification of mental deficiency has to be decided upon, although the examination of backward children is always tedious and difficult. During the year there were 315 *new* cases of retardation, the degree of retardation varying from one to five years. The following analysis of the causes of retardation shows the relative importance of the various factors commonly found to account for backwardness in school children :—

Causes of Retardation.	No. of children.	Degrees of retardation expressed in years.					
		1 year	2 years	3 years	4 years	5 years	Not stated.
Innate dullness	249	10	176	55	4	..	4
Insufficiency of education ..	15	2	9	2	1	..	1
Physical defects.. .. .	9	2	6	1	..	..	..
Suspected Mental Deficiency ..	13	..	1	8	3	1	1
Mental Deficiency	12	..	2	4	4	1	..
Bad Home Conditions	3	1	2	..	..	..	..
Laziness	2	1	1	..	..	..	..
No Diagnosis	12	2	3	7	..	..	..
	315	18	200	77	12	2	6

In addition, 1,178 children, diagnosed as dull and backward *in previous years*, were re-examined, the findings in connection with whom were as follows :—

Backward, but not improving	730
Backward, but improving	303
Doubtful cases of mental deficiency	40
Mentally defective	79
Now normal	26

INFECTIOUS DISEASES.

Notifications.—The following notifications were sent in during the year by the *Head Teachers* :—

Influenza	7,288	Ringworm	132
Coughs and Colds	4,791	Diphtheria	100
Measles	2,398	Other Diseases	72
Chicken-pox	1,014	Tonsilitis	55
Whooping Cough	803	Bronchitis	39
Mumps	610	German Measles	34
Sore Throat	385	Conjunctivitis	29
Impetigo	234	Scabies	24
Scarlet Fever	214	Pneumonia	4

Certificates of Exclusion.—Under Article 20 (b), 1,010 certificates of exclusion from school on account of infectious disease and other conditions were sent in by the *Assistant School Medical Officers and Tuberculosis Officers*, of which the following are the particulars :—

Impetigo	97	Bronchial Catarrh ..	71
Coughs and Colds	43	Rheumatism	35
Sore Throat	30	Suspected Phthisis ..	15
Tonsillitis	68	Whooping Cough	33
Debility	62	Scarlet Fever	8
Bronchitis	42	Otorrhoea	25
Scabies	18	Chorea	20
Influenza	52	Mumps	8
Tuberculous Glands ..	51	Tubercular Peritonitis ..	5
Heart Conditions	18	Chicken-pox	19
Ringworm of Body ..	22	Anaemia	18
Ringworm of Scalp ..	7	Diagnosed Phthisis ..	6
		Various Conditions ..	237

Closure of Schools.—During the year 33 schools were closed by the Local Education Authority to prevent the spread of infectious disease and below are given particulars of school school closures during the year :—

Measles	31
Diphtheria	2

In thirty instances attempts were made to prevent outbreaks of measles by closing the schools for about a week, six or seven days after the occurrence of the first case, with the following result :—

In 13 instances no further cases occurred. Closure in these cases must therefore be considered to have been without effect and, therefore, unnecessary.

In 10 instances cases occurred during closure, and further cases developed on re-opening. Closure again proved to be without effect.

In 2 instances no cases occurred during closure, but one or more cases developed on re-opening. Again closure did not justify itself as these bore no relationship to the first cases.

In 5 instances cases occurred during the closure, and did not attend school till free from infection. There was no further outbreak, and it is justifiable to conclude that closure was effective in checking the spread of the disease.

Reasons for Closure.—There is, of course, no justification on medical grounds for closing a school unless the spread of infection is thereby going to be prevented, and the School Medical Officer has no authority to advise closure on account of poor attendance, notwithstanding the fact that the number of children present is sometimes so low that there is little justification on educational grounds for keeping the school open.

Some Authorities do not close schools at all on account of ordinary infectious disease, believing that outbreaks can better be controlled by keeping them open. Such an attitude can no doubt be justified when the area of a Local Education Authority happens to be a large town in which therefore it is possible for the School Medical Officer to keep schools where there is an outbreak of infectious disease under close, if not daily, supervision. It is not, however, entirely applicable to an area which is co-extensive with a large rural county, where long distances have to be travelled, and in which a school medical inspection may have to be carried out in a direction far removed from those schools in which infectious disease is present. In such circumstances closure not infrequently becomes advisable, although probably it is resorted to somewhat too frequently.

A Joint Memorandum issued by the Ministry of Health and the Board of Education states :—

“ While the power to close a school in the interests of public health must continue to rest both with the Sanitary Authority and with the Local Education Authority acting on the advice of their expert officers, it is a power which should be used with scrupulous care and caution. It may be safely laid down as a general principle that if the power to exclude individual children be used to the best advantage, it is only in special and quite exceptional cases that it will be necessary to close a school in the interests of public health.”

The infectious disease which most frequently gives rise to criticism of the attitude adopted by the School Medical Officer is measles, an extremely infectious disease, the control of which is made still more difficult by the fact that the period of greatest infectivity is during the three or four days which must elapse between the commencement of the illness and the appearance of the rash. During this stage of the illness the parent often regards his child as suffering from an ordinary cold, and allows him to go to school with disastrous results to the other children who have not had the disease. The procedure is also repeated by the infected children in one another's homes, in Sunday Schools and in places of entertainment. In a populous area therefore it is quite impossible to control an outbreak of measles by closure of the schools, which is the only ground on which the School Medical Officer has authority to advise it.

Dealing more specifically with measles, this Memorandum states :—

“ there is a general concensus of opinion that except in the case of scattered rural populations, it is useless as a means of checking the spread of the disease. As a rule, closure is deferred until a large proportion of the children are already absent, but even in those cases where early class closure has been attempted after the occurrence of a single case, experience appears to show that the only effect is to postpone and prolong the epidemic. It appears certain that in populous districts school closure for measles has but little value as a public health measure.”

FOLLOWING-UP.

The whole of the following-up, except such assistance as is given from time to time by the Attendance Officers, is done by the School Nurses, who are notified of the dates of the medical inspections and are always present at the time of the visit of the Medical Inspectors to the schools, unless, as occasionally happens, they are detained elsewhere because of some more urgent matter in connection with their work. The following statement shows how cases recommended for treatment are visited and gives particulars of the number of visits paid :—

	No. of cases.	No. not visited.	Total visits.
District Nurses (87)	2251	272	5165
Nurses working on their own account (2) ..	276	55	679
Whole-time School Nurses (2)	536	23	2070
Whole-time Health Visitors (10)	1049	133	1920
Total ..	4112	483	9834

FACILITIES FOR TREATMENT PROVIDED BY THE COUNTY COUNCIL.

The following arrangements have been made to provide treatment for school children at hospitals and at clinics held in the County :—

At Hospitals :—

Eye Defects—Eye, Ear and Throat Hospital, Shrewsbury ; Kidderminster Hospital.

Ear Defects—Eye, Ear and Throat Hospital, Shrewsbury.

Throat Defects—Eye, Ear and Throat Hospital, Shrewsbury ; Kidderminster Hospital ; The Lady Forester Hospitals at Broseley and Much Wenlock ; Oswestry, Wellington, Ellesmere, Chirk, and Shifnal Cottage Hospitals.

Orthopaedic Conditions—Robert Jones and Agnes Hunt Orthopaedic Hospital.

Pulmonary Tuberculosis—King Edward VII. Memorial Sanatorium, Shirlett ; Prees Heath Sanatorium.

At Clinics :—

School clinics for minor ailments are held at Bridgnorth, Dawley, Ellesmere, Ludlow, Ironbridge, Market Drayton, Newport, Oakengates, Oswestry, Wellington and Whitchurch. These are attended daily by the school nurses, and are visited once a week by the Assistant School Medical Officers, with the following exceptions :—Newport, which is held daily but is only visited fortnightly by the medical officer, and Ellesmere, which is held fortnightly.

Eye Clinics are held from time to time at Bishop's Castle, Bridgnorth, Highley, Shifnal, Ellesmere, Ironbridge, Cleobury Mortimer, and Whitchurch, and attended by an Assistant School Medical Officer.

An Eye Clinic at Oswestry is held occasionally and attended by a general practitioner with special experience in eye work.

Eye Clinics attended by specialists are held weekly at Ludlow, and occasionally at Market Drayton.

Orthopaedic Clinics, attended by the staff of the Shropshire Orthopaedic Hospital, are held weekly at Bridgnorth, Dawley, Ironbridge, Ludlow, Market Drayton, Oakengates, Oswestry, Shrewsbury, Wellington and Whitchurch, and fortnightly at Ellesmere, Newport and Wem.

Tuberculosis Clinics are held at Bridgnorth, Ludlow, Oswestry, Shrewsbury, Wellington, and Whitchurch.

X-Ray Treatment for ringworm is provided at a clinic in Birmingham by special arrangement with the Birmingham Education Authority.

Skin Disease.—In addition to 655 children treated at the County Council School Clinics, particulars of which are given on p. 21, one case was sent to Birmingham for X-Ray treatment for ringworm.

NUMBER OF PATIENTS TREATED AT SHROPSHIRE AFTER-CARE CENTRES DURING THE YEAR 1933.

Diagnosis.	Total treated.			Cured.			Improved.			Refused treatment.			Left District.			Treated elsewhere.			No improvement.			Died.			Number on Book.			
	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	
1. Arthritis	2	6	66	1	..	2	..	..	12	..	..	3	..	..	..	..	..	2	..	..	..	..	..	1	1	6	4
2. Congenital Deformities	34	52	8	..	2	..	..	1	..	2	4	..	1	..	1	..	1	..	..	..	..	..	..	..	31	44	7
3. Claw Foot .. ..	..	39	30	..	4	1	..	1	2	..	7	4	..	..	1	..	..	2	..	..	..	..	..	..	..	27	2
4. Erb's Palsy	6	5	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	6	4	..
5. Flat Foot	36	169	139	..	18	9	..	2	9	18	36	26	..	2	9	..	4	..	..	..	..	..	..	..	18	107	56
6. Hallux Rigidus ..	..	2	5	..	..	1	..	..	1	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	1	3	..
7. Hallux Valgus ..	..	4	18	..	2	1	..	..	1	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	..	2	14
8. Injuries	6	61	124	3	22	19	..	5	27	1	3	8	2	1	2	5	1	28	53
9. Knock-knees	41	91	3	1	13	..	..	2	1	4	25	2	1	..	..	1	..	..	..	..	..	1	..	..	1	51	..
10. Osteomyelitis ..	..	21	19	..	2	1	..	2	8	..	1	2	..	..	1	..	1	..	..	..	..	..	..	..	2	46	29
11. Poliomyelitis ..	3	53	36	1	1	..	..	..	2	..	2	1	..	4	3	..	..	1	..	..	..	..	..	1	15	6	..
12. Rickets	61	16	1	14	..	..	..	1	..	14	6	..	1	..	..	..	1	..	..	..	..	..	..	..	31	8	1
13. Round Back .. ..	..	61	11	..	3	2	..	2	2	..	8	1	..	2	..	..	1	..	..	..	1	..	..	..	..	45	6
14. Scoliosis	1	22	24	..	1	1	..	..	1	..	2	1	..	..	2	..	1	1	..	..	..	..	..	1	1	18	17
15. Spastic Diplegia ..	..	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	4	..
16. Spastic Hemiplegia	2	15	7	1	..	..	..	..	..	..	3	..	..	2	..	..	..	..	..	..	..	..	..	..	1	10	..
17. Spastic Monoplegia	..	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	1
18. Spastic Paraplegia	4	11	4	1	2	3	1	1	2	8	1
19. Surgical Tuberculosis	2	57	86	1	3	..	..	4	5	..	..	4	..	2	4	..	..	1	..	..	..	..	2	1	48	7	..
20. ? Surgical Tuberculosis	..	5	3	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	3
21. Torticollis	1	7	..	..	2	..	..	1	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	4	..
Others	40	85	118	2	14	8	1	6	30	10	14	15	1	..	6	1	4	4	..	1	2	..	1	1	25	45	52	
Totals	239	789	703	24	88	45	1	27	101	51	114	69	4	13	32	4	16	16	..	1	2	1	3	6	154	527	432	
	1731			157			129			234			49			36			3			10			1113			

N.B.—Cases from the Borough of Shrewsbury (with the exception of tuberculous patients) are excluded from this Table.

PREVENTIVE CASES.

Diagnosis.	Total treated.			Cured.			Improved.			Refused treatment.			Left District.			Treated elsewhere.			No improvement.			Died.			On Books. 31/12 33.		
	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+	—5	5—16	16+
1. Claw Foot .. ..	..	3	..	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	..
2. Flat Foot	28	119	3	..	13	1	..	2	..	6	13	1	..	1	..	1	2	..	..	..	..	..	1	..	21	87	1
3. Knock-knees	34	77	..	1	7	..	..	3	..	2	14	..	..	1	..	..	..	..	..	..	..	..	..	..	31	52	..
4. Rickets	25	2	..	5	..	..	1	..	..	4	2	..	..	..	..	..	..	..	..	..	..	..	..	..	15	..	..
5. Round Back .. ..	..	33	1	..	3	..	..	2	..	..	7	1	..	..	..	..	..	..	..	..	..	..	..	..	..	21	..
6. Others	2	8	1	..	1	..	..	..	..	1	2	..	..	..	..	..	..	..	..	..	..	..	..	..	1	5	1
Totals	89	242	5	6	24	1	1	8	..	13	38	2	..	2	..	1	2	..	..	..	..	..	1	..	68	167	2
	336			31			9			53			2			3			..			1			237		

Tuberculosis.—Eleven School children suffering from phthisis were admitted to the Shirlett Sanatorium during the year, and one to Prees Heath Sanatorium. Other forms of tuberculosis were dealt with at the Shropshire Orthopaedic Hospital, and are included in the particulars given below.

Crippling Defects and Orthopaedics.—The following is a summary of cases treated at the Robert Jones and Agnes Hunt Orthopaedic Hospital during 1933, and paid for by the Public Health and Medical Inspection Committees :—

Disease.	Under 5 years of age.	5—16 years of age.	Over 16 years of age.	Total.
Tuberculosis of Bones and Joints ..	5	21*	33	59
Fractures and Dislocations	1	16	..	17
Diseases and Injuries of the Nerves ..	3	12	..	15
Osteomyelitis .. .. .	..	9	..	9
Congenital Deformities.. .. .	4	5	..	9
Claw Foot .. .. .	..	8	..	8
Flat Foot .. .. .	..	7	..	7
Spinal Curvature—Non-tubercular ..	..	6	..	6
Arthritis (Septic and Rheumatoid) ..	..	6	..	6
Rickets	3	2	..	5
Conditions due to faulty footwear ..	..	5	..	5
Club Foot	2	2	..	4
Diseases of the Hip—Non-tubercular ..	1	1	..	2
Torticollis .. .. .	..	1	..	1
Injuries to Hands .. .. .	..	1	..	1
Total for 1933 ..	19	102	33	154
Total for 1932 ..	18	69	26	113

* Includes 6 Shrewsbury Borough School Children.

In addition to those treated in the Orthopaedic Hospital during the year, a much larger number of cases received treatment at the various After-Care Centres. Some of these cases had already received in-patient treatment at the hospital but, having completed this part of their treatment and having been discharged, continued to receive further treatment as out-patients at the After-Care Centres. A much larger number of patients had, however, never received hospital treatment; and, the orthopaedic defect being only of a minor nature, owing in many instances to early detection, it had been found possible to give the necessary remedial exercises or other simple forms of treatment at the After-Care Centres, thus obviating the necessity for in-patient treatment at the hospital. A large amount of the treatment carried out at the After-Care Centres is, therefore, largely and very profitably preventive, and in this way the great majority of cases in this county are never allowed to develop orthopaedic defects so pronounced as to necessitate in-patient hospital treatment.

Full particulars of the patients attending the Orthopaedic Clinics are given in the tables facing this page, but the following is a summary of the work carried out at these centres during 1933 :—

No. of attendances	..	..	..	..	..	10,748*
No. of patients treated	..	..	..	..	..	2,048
No. on the books on 1st January	..	..	..	..	..	1,362
No. on the books on 31st December	..	..	..	..	..	1,350
No. of new cases	..	..	..	..	..	705
No. of cases discharged	..	..	..	..	..	717

In addition, 66 cases were examined and no treatment found necessary.

* 1,419 under five years ; 6,037 five to sixteen years ; 2,337 over sixteen years, and 955 tubercular cases—all ages.

Eye Defects.—1,278 children were treated for defects of vision, particulars being given below. In addition, ten children received treatment for other defects or diseases of the eyes and four children were operated on for squint.

Hospital or Clinic.	Number of Children seen.	Glasses prescribed	Glasses obtained.	No change of Glasses ordered.	Other treatment.	Visit to Salop Hospital advised.	No Glasses or treatment necessary.
Salop Eye, Ear and Throat Hospital	733	501	500	155	31	..	46
Ludlow Eye Clinic	191	135	135	37	2	..	17
Oswestry Eye Clinic	103	89	89	5	..	2	7
Market Drayton Eye Clinic ..	54	36	35	7	4	..	7
Kidderminster Hospital ..	9	9	9	..	..	..	..
Newtown Infirmary	1	1	1	..	..	..	..
Assistant School Medical Officer at Whitchurch Eye Clinic ..	63	41	40	19	..	2	1
Bridgnorth do. ..	53	46	45	3	..	1	3
Highley do. ..	17	11	11	2	..	1	3
Ellesmere do. ..	34	26	26	6	..	1	1
Shifnal do. ..	9	7	7	1	..	..	1
Ironbridge do. ..	11	8	8	..	..	1	2
Totals for 1933 ..	1278	910	906	235	37	8	88
Totals for 1932 ..	1211	901	896	170	40	7	93

Ear Disease and Hearing.

Hospital.	Number of Children seen.	Received Treatment.				No Treatment necessary.
		Remedied.	Improved.	Not improved.	Not known.	
Salop Eye, Ear and Throat Hospital ..	35	13	17	5	..	..
Totals for 1932 ..	41	15	17	9	..	1
„ 1931 ..	55	22	27	5	..	1
„ 1930 ..	59	18	34	5	1	1
„ 1929 ..	55	15	29	8	..	3

A number of these children required treatment for deafness and otorrhoea as a consequence of unhealthy tonsils and adenoids, treatment for which had previously been refused.

Diseases of the Nose and Throat.—Ten children suffering from purely nasal conditions were seen at the Salop Eye, Ear and Throat Hospital, and 10 were found to require treatment. The commonest conditions, however, which necessitated hospital treatment were unhealthy tonsils and adenoids, particulars of which are as follows :—

Hospital.	Number of Children seen.	Operated on.	Other treatment.	No treatment necessary.
Salop Eye, Ear and Throat Hospital ..	162	162	..	..
Broseley and Wenlock Hospitals ..	43	43	..	..
Oswestry Cottage Hospital	47	45	..	..
Ellesmere Cottage Hospital	11	11	..	..
Kidderminster Hospital	4	4	..	..
Wellington Cottage Hospital	93	93	..	..
Chirk Cottage Hospital	8	8	..	..
Shifnal Cottage Hospital	2	2	..	..
Totals for 1933 ..	370	368	..	..
Totals for 1932 ..	634	632	1	1
Totals for 1931 ..	833	833	..	..
Totals for 1930 ..	792	790	2	..

In addition to the above, 32 cases were operated on under private arrangements, making a total for the year 1933, of 402 operations.

Reports received from the Medical Officers on 595 children who had undergone operative treatment for tonsil and adenoid conditions showed, on the whole, a very great improvement in the health of the children, although in a number of cases tonsils and adenoids had not been completely removed. Below is given in tabular form a brief summary of these reports :—

No. with Tonsils and Adenoids.	No. with Tonsils only.	No. with Adenoids only.	Total No. of cases.	No. of cases completely dealt with.	Cases not completely dealt with.		
					Tonsils.	Adenoids.	Tonsils and Adenoids.
535	55	5	595	544	36	9	6

EFFECTS OF OPERATION UPON HEALTH.

				<i>Cured.</i>	<i>Improved.</i>	<i>Not improved.</i>
General Health	..	..	..	—	482	11
Mouth Breathing	..	..	..	273	57	11
Otorrhoea	..	..	..	19	1	5
Deafness	..	..	..	9	7	1
Catarrhal Symptoms		..	..	41	84	18
Enlarged Glands	..	..	..	191	57	26
Minor Deformities	..	..	..	2	4	1
Rheumatism	..	..	..	1	—	—
Intelligence	..	..	..	—	13	—
Speech..	..	..	..	—	2	—
Bronchitis	..	..	..	9	5	1
Chest Expansion	..	..	..	—	1	—

School Clinics for Minor Ailments.

Table showing conditions for which treatment was received.

Defect or Illness.	Children referred at S.M.I.	Other Children.	Examina- tions by M.O.	Attend- ances.	Results of Treatment.		
					Remedied.	Improved.	Unaltered.
Skin :—							
Ringworm—head	4	16	39	82	19	..	1
Ringworm—body	6	21	66	276	27	..	..
Scabies	10	14	63	126	20	..	..
Impetigo	5	381	533	3140	369	14	2
Minor Injuries	10	735	1035	5111	675	38	21
Other skin diseases	7	191	237	1252	173	19	4
Ear Disease	41	145	318	1655	133	25	10
Eye disease (external and other)	38	278	476	1570	236	50	16
Verminous conditions	0	32	13	103	32	..	..
Tonsils and Adenoids	4	32	57	74	35	1	..
Other conditions	109	1368	1952	5554	1066	236	90
Total for 1933	234	3213	4789	18943	2785	383	144
Total for 1932	247	3793	5482	21570	3581	280	106

Table showing attendances at each Clinic.

Clinic.	Children referred at S.M.I.	Other Children.	Examina- tions by M.O.	Attend- ances.	Results of Treatment.		
					Remedied.	Improved.	Unaltered.
Bridgnorth .. ..	..	277	252	2046	245	32	..
Dawley	48	184	474	1544	225	7	..
Ludlow	19	238	214	1388	235	21	1
Ironbridge	15	429	358	1820	315	81	20
Market Drayton	11	339	896	3245	297	29	24
Newport	3	129	99	722	92	7	33
Oakengates	17	465	815	2679	381	86	15
Oswestry	47	503	482	2098	378	51	14
Wellington	57	449	469	1200	469	33	4
Whitchurch	17	200	730	2201	148	36	33
Totals	234	3213	4789	18943	2785	383	144
Total for all Clinics, 1922 ..	347	1126	..	8197	1172	238	62
„ „ 1923 ..	312	1640	..	10034	1674	206	72
„ „ 1924 ..	195	1540	..	11662	1402	235	77
„ „ 1925 ..	244	2017	..	13020	1768	331	82
„ „ 1926 ..	329	2507	..	13005	2211	444	93
„ „ 1927 ..	405	2717	..	15158	2505	442	161
„ „ 1928 ..	301	3006	..	18409	2537	560	174
„ „ 1929 ..	211	3117	3831	17011	2792	357	120
„ „ 1930 ..	311	3498	5944	24338	3133	454	153
„ „ 1931 ..	237	3844	6317	23691	3496	396	106
„ „ 1932 ..	247	3793	5482	21570	3581	280	106
„ „ 1933 ..	234	3213	4789	18943	2785	383	144

Teeth.—The success or failure of the Dental scheme must depend upon the amount of sepsis removed and the number of permanent teeth saved, and not upon the refinements of dental treatment. Children of all ages in the schools are dealt with at each visit of the Dental Officer.

Not only are all ages dealt with, but the schools are now being visited on an average about once in nine months. This has been possible owing, partly and unfortunately, to the considerable number of refusals, but chiefly to the smaller amount of attention required as a result of previous treatment. The results of inspection and treatment are given in the tables at the end of the report.

One school was not visited during the year. All the remainder were inspected and were also treated during the year.

38 departments were treated twice during the year, and

11 schools were inspected twice, but the second treatment was not given until 1934.

The number of unsaveable permanent teeth is a measure of the imperfection of the dental scheme. In 29,663 examinations of children, only 4,632 unsaveable permanent teeth were found, and 4,157 of these were due to refusal of treatment at the previous inspection. Only 475 can therefore be legitimately attributed to any shortcomings of the scheme. Of this number, 225 were due to lack of opportunity to complete the treatment of the mouth on the previous occasion, 78 were due to unusually long inter-inspection period, and only 211 were due to the fact that the caries was so rapid as to destroy the tooth in the ordinary inter-inspection period. These figures show that if there were no refusals, and no extra long periods between inspections, there would be very few permanent teeth destroyed. In the East of the County the total number of unsaveable teeth, apart from refusals, was only 23.

The difference between the number referred for treatment (including 1,551 cases brought forward from 1932) and the number treated was 5,784. The details are given in the following statement :—

		Refusals.	Absent on day of Treatment	Left School.	To be treated next year.	Treatment deferred.
East of County (Mr. Birch)	..	936	232	25	608	0
South of County (Mr. Keenan)	..	1058	92	10	245	51
North of County (Mr. Catchpole)	..	2163	225	24	102	13
Totals for 1933	..	4157	549	59	955	64
„ 1932	..	3912	512	80	1551	93

The following table shows the schools in which the percentage of consents was very high, and those in which it was very low. During the year under consideration 48 schools had over 90 per cent. of consents as opposed to 52 in the previous year ; and the number of schools with less than 50 per cent. of consents rose from 14 to 26 in the same period. This is a reversal of the previous trend, and is in fact the first year in which there has not been an increase in the number of schools with over 90 per cent. of consents and a decrease in the number of schools with less than 50 per cent. of consents.

PERCENTAGE OF " CONSENTS " FOR TREATMENT.—SCHOOLS WITH 90 PER CENT. OR OVER.

<i>School.</i>				<i>School.</i>			
Langley Council Infants	100			Cardington	94		
Buildwas	100			Acton Burnell	94		
Eaton Constantine	100			Brockton	94		
Kynnersley	100			Bourton	94		
Donington	100			Hadley Council Girls	93		
Sutton Maddock	100			Loughton	93		
Stanton-on-Hine-Heath	100			Bishop's Castle Girls	93		
Longden-on-Tern	98			Stockton Norton	92		
Woodcote	98			Malins Lee Institute	92		
Langley Council Girls	98			Albrighton	92		
Richard's Castle	98			Hopton Wafers	92		
Smethcote	97			Hopesay	92		
Ryton	96			Crudgington	91		
Melverley	96			St. George's Girls	91		
Bishop's Castle Infants	96			Wrockwardine Wood Council Snr.	91		
Lee Brockhurst	96			Jackfield C.E. Mixed	91		
Quatt	95			Adderley	91		
Wroxeter	95			Condover	91		
Hordley	95			Lea Cross	91		
Madeley C.E. Boys	95			Onibury	91		
Worfield	95			Newport R.C.	90		
Little Wenlock	94			Rushbury	90		
Wellington R.C.	94			Edgton	90		
Broughall	94			Bicton	90		

SCHOOLS WITH NOT MORE THAN 50 PER CENT.

<i>School.</i>				<i>School.</i>			
Dawley C.E. Infants	50			Kinlet	44		
Tetchill	50			Whitchurch C.E. Boys	43		
Moreton	50			Edstaston	42		
Newcastle	49			Coreley	41		
Woore	48			Clee St. Margaret	41		
Bridgnorth St. Mary's Mixed ..	47			Whitchurch Methodist M. ..	40		
Welshampton	46			Button Oak	40		
Chirbury	46			Maesbury	38		
Stoke-on-Tern	45			Plowden	38		
Great Wollaston	45			Selattyn	37		
Newtown	45			Leaton	34		
Weston Rhyn	44			Knockin	23		
Prees C.E.	44			Bromlow	22		

Mr. Stephen Keenan, L.D.S., reporting on the Southern Division of the County, states :—

“Although the number of children in my area is so great, the main object of the Dental Scheme is for the most part attained. With rare exceptions every child who has received treatment once a year during school life, leaves at the age of fourteen with the mouth free from dental disease, all saveable teeth treated by filling and all unsaveable teeth removed.

“ By concentrating upon the permanents and dealing with the caries in its earliest stages an effort is made to preserve the whole of the permanent dentition. This is not always practicable, however, although the number of those who suffer loss of permanent molars is becoming less each year.

“ When treatment is carried out at a clinic, the work may be completed owing to the possibility of securing a second appointment. In the rural areas where the work is done in the school, that which is calculated to be of the greatest benefit is undertaken—the extraction of septic teeth and the filling of the six year molars. When for some reason the work cannot be completed an appointment to attend at the nearest centre is made.

“ It is satisfactory to report that there is a decided willingness on the part of the parent to comply with this request, and the patient seldom absents himself. That progress is being made is evidenced by the steady decrease in the number of unsaveable permanent teeth. One has to admit that this decrease is very gradual, but this must be attributed to the persistent refusals who show increasingly worse conditions. The returns show a greater number of extractions of the permanent teeth during the current year. This is explained by the securing of consents from among these habitual refusals, and is not due in any way to any tendency to lose ground.

“ There is also an increase in the number of permanent teeth filled. Probably this is accounted for by the fact that the cavities to be dealt with were less advanced in caries and accordingly more rapidly and more easily treated.

“ The treatment of the temporary teeth has consisted mostly of extractions. The filling of the cavities of those teeth would take up time which could be much more profitably spent upon the permanent teeth.

“ The spread of dental education has done much to lighten the work of the School Dental Officer. This is not only noticeable in the substantial rise in the percentage of consents to treatment, but in the whole attitude of the parents to the School Dental Service. Where formerly one found apathy or mere tolerance, there is now almost everywhere interest and enthusiasm. Parents are now eager to point out the defects, and often have a very fair idea of the treatment required. Credit for this state of things is due to the Teachers, Nurses and School Medical Officers. The Dental Officer is so fully occupied with the great amount of practical work which presents itself that he has little time to devote to propaganda.

“ I look forward with hope to the suggested greater facilities for the dental work in the Welfare Centres. A well lighted room, equipped with a dental chair and spittoon would be an enormous boon.

“ It is to Research we look for much needed help in our struggle with dental disease. Much valuable knowledge has been brought to dental science by such investigators as Broderick, Sprawson, Mellanby, and Wallace. Although they differ in their mode of attack upon caries, they seem to be at one on the question of its causation, namely, the acid-forming micro organisms of the mouth. Methods of prevention which aim at the establishing of a better calcium metabolism judging by the results claimed, have much to recommend them. Nevertheless, if carbohydrate stagnation be the direct cause of decay, the simple methods calculated to attack the malady at its source cannot fail to make a very strong appeal.

“ The disquieting fact that the condition of the teeth of the school entrants (aged five or six years) continues to be very bad, calls for a still more intense campaign in this direction.

“ It is my belief that it will be through the adoption and observance of the rules of oral hygiene embodied in your leaflets and taught with such success in this county that the much desired improved conditions will be brought about.”

OPEN AIR EDUCATION.

Playground Classes are encouraged, but they are held only in a comparatively small number of schools, and owing to climatic conditions it is unlikely that there will be any great development of open-air education until it is possible to give it by educating children in schools constructed on the open-air principle.

Residential Open-Air Schools.—There are always a certain number of children who are in a persistently poor state of health, not traceable to any definite physical defect, but probably attributable in most instances to poor home circumstances, lack of proper food and unhygienic conditions. No form of purely medical treatment can be expected to restore them to normal health, and the only remedy would seem to be to get them removed to where there are better conditions of life, and where their physical requirements will be more adequately met. It is for such children that a period of residence in an open-air school is particularly beneficial.

The Local Education Authority maintains three beds for such children in open-air schools. These beds are not occupied continually by the same children, but carefully selected children are sent for a period of three months, when their places are taken by other children equally suitable.

Three children were in the St. Catherine Home, Ventnor, Isle of Wight, at the beginning of the year, and eight more cases were sent there during the year. In addition, four cases were admitted to the Liverpool Open-air Hospital for Children, Leasowe, Wirral. Twelve children were discharged during the year, leaving three children in the Liverpool Open-air Hospital at the end of the year. All the children discharged were reported as having improved, some in a very marked degree.

The number of children who are sent to open-air schools has, of course, to be limited, and the length of stay in the schools to be curtailed in order to make these special facilities available for as large a number as possible. The number of children in ordinary elementary schools who could benefit from a change to an open-air school very much exceeds the accommodation available, and if the requirements of this County were to be met, many more than three beds would need to be at the disposal of the Local Education Authority.

In this County, during the year 1933, the School Medical Inspectors reported 549 of the children examined at routine medical inspections as suffering from malnutrition due to one cause or another. As the number of children so examined only represented about one-third of the children on the registers, it can be calculated that about 1650 children attending Elementary Schools suffer from poor health, which shows itself in the form of malnutrition. These figures are sufficient to show that, if a special open-air residential school were provided, where the children would be well fed and would live under the best hygienic conditions, the expenditure involved would be abundantly justified in the benefit to health of a large number of the child population of school age. The benefit to these children would not be confined only to matters of health, as the majority of the children who suffer from malnutrition come from poor homes, and to have had an opportunity of living under satisfactory conditions for a number of months would have a far-reaching effect in many other ways.

PHYSICAL TRAINING.

The work of the Organiser of Physical Training is developing along satisfactory lines, and is helping to bring about a gradual improvement in the general condition of the school population.

The Organiser of Physical Training not only visits the schools in order to supervise and guide the teachers in this branch of their work, but also arranges special classes for teachers which are held in various parts of the County in the evenings and on Saturday mornings, of which the following are the particulars :—

<i>Centre.</i>	<i>Duration</i>		<i>Class Hours.</i>	<i>Students.</i>		<i>Student Hours.</i>	<i>Percentage.</i>
	<i>From</i>	<i>To</i>		<i>Men.</i>	<i>Women.</i>		
Ludlow	30th Jan.—	10th April	7½	2	25	170	83.9
Ludlow	9th Oct.—	4th Dec.	12	3	22	216	72.0
Oswestry.. ..	9th Oct.—	5th Dec.	13½	14	41	627	84.4

The acquisition of playing fields is proceeding in various parts of the County, and arrangements have been made, either by acquisition or payment of rent, by which playing fields have now become available for the use of the scholars in 65 schools. Although progress in this matter is somewhat slow, and the ground secured is not always, for various reasons, entirely suitable, the difficulties which have to be met and overcome are often very great.

Report of the Organiser of Physical Training.

Pending the publication of the New Syllabus of Physical Training, fewer classes of instruction for teachers were arranged this year.

Soon after the commencement of the Oswestry Class in September, the Organiser received an advanced copy of the Syllabus and began at once to introduce some of the newer exercises and activities. Towards the end of the course the new book was published and the Local Education Authority sent out one copy to each school.

Teachers were advised to begin with the simpler tables of exercises first, and endeavour to work up gradually to the tables suggested in the syllabus as being suitable to the various age groups or classes.

It is too early yet to judge of the general reception of the New Syllabus in the schools. Nevertheless the teachers in the schools which have been visited since its publication appear to welcome the definite advance in the nature of the work ; they realise that the more adventurous and freer type of exercise cannot fail to appeal to and stimulate the interest of the children.

It will be necessary for all concerned to make a great effort to procure suitable footgear if all the activities in this new book are to be attempted ; also the provision of mats or boards (on which children can sit, kneel or lie) becomes essential.

In rural schools especially, where the surface of the playground is often deplorable, much of the newer type of work will be impossible, and the ingenuity and enterprise of the teachers will be tested to the utmost in carrying out the suggestions in the syllabus. Credit must be given to those who tackle many of the difficulties successfully.

Fortunately each year sees a gradual improvement in the state of some playgrounds. Good surfaces are more essential from the point of view of Physical Training than ever before.

Swimming.—Wonderful progress was made in this branch of physical training this year. This was no doubt partly due to the hot summer, and also partly to more careful and methodical training.

The number of certificates gained showed a great increase on last year's record. For the first time small certificates were issued to each child who could swim one length (*i.e.*, 25 yards). This proved a great incentive—to beginners. The test for the Proficiency Certificate remained the same, *i.e.* :—

25 yards breast stroke, 25 yards on back without use of arms, 25 yards any other stroke they wish, and a good dive in the deep end of the bath and as a rule it takes two seasons steady work to reach this standard.

Altogether at the various centres 312 “length” certificates and 120 “proficiency” certificates were gained.

The new open-air swimming bath at Market Drayton was opened officially in May. Arrangements have been made for the children from all schools in Market Drayton to attend for instruction each week.

The Teachers began at once by using good teaching methods and the results were remarkably satisfactory.

Market Drayton has every reason to be proud of its Swimming Bath, and the benefit to the children of the town should be inestimable.

Of course the wonderful weather throughout the season helped to make the initial season a great success.

On May 2nd, Mr. J. B. Hall, of Cheshire, gave a lecture at Monkmoor Senior School, Shrewsbury, on the “Organisation of Swimming Lessons in Elementary Schools.” The County Teachers were invited to attend, and the response was very satisfactory. The expenses of £2 2s. 0d. were shared by the County Local Education Authority and the Shrewsbury Schools' Athletic Association.

Apparatus.—The provision of equipment for Physical Training lessons, although limited in extent, is still greatly appreciated in all schools, and it helps the Teachers to get the right type of work going in their lessons.

Grants.—Only three grants of £5 each were available this year to enable Teachers to attend Vacation Courses, and the following teachers were selected :—

Mr. Boon, Oswestry Senior Boys ;
Miss Holland, Market Drayton Senior ;
Mr. W. Moss, Wrockwardine Wood Senior.

Mr. Porter, Market Drayton Senior School, attended a Swimming Course in Scarborough at his own expense.

General.—The progress in most branches of Physical Education throughout the County is quite appreciable, although not rapid.

In so far as efforts are made to carry out suggestions from the New Syllabus, one may reasonably hope to see some very interesting developments during the ensuing year.

K. W. DAVEY,
Organiser of Physical Training.

CO-OPERATION OF PARENTS, TEACHERS, SCHOOL ATTENDANCE OFFICERS AND VOLUNTARY BODIES.

PARENTS.—A notice is sent to all parents inviting their presence at the routine medical and dental inspections, and a special effort is always made to get the parents of seriously defective children to attend.

TEACHERS.—In addition to the help which the teachers give at ordinary school medical inspections, the assistance which they give during the inter-inspection periods in bringing their influence to bear on the parents to secure the treatment which has been advised is very great. This is especially so in the matter of dental treatment, and the effect of a change of head teacher is often very markedly reflected in the number of children whose parents consent to treatment. In the absence of the co-operation of the teachers the value of the medical side of the work would be very much reduced, as they are often instrumental in bringing to the notice of the medical inspector children in whom abnormalities and defects have begun to develop during the inter-examination periods.

SCHOOL ATTENDANCE OFFICERS.—School Attendance Officers are present at the medical inspections when required, and are available for bringing up children who are absent and whose examination is considered desirable. In persistently verminous cases, where it is necessary to take legal proceedings and the nurse objects to appearing in court, they are always present at the final examination of the child, and are therefore able to give evidence when required.

The opportunities which they have of seeing whether children absent from school on medical grounds are getting treatment are often greater than the opportunities of the school nurse, and they are now instructed to report at once any such children who are absent and are apparently not receiving or carrying out treatment, so that they can be further investigated if necessary by the medical department.

VOLUNTARY BODIES.—The Inspectors of the National Society for the Prevention of Cruelty to Children have been of great help in obtaining medical treatment where other means have failed, and in dealing with cases of gross neglect.

BLIND, DEAF, DEFECTIVE AND EPILEPTIC CHILDREN.

The following table gives particulars of the children certified as exceptional *during the year* by the Medical Officers :—

	Certified suitable for Special School.	Notified to Local Authority as uneducable.	To be kept under observation.
Mentally Defective	76	23*	34
Epileptic	4	..	3
Blind	2	..	..
Deaf and Dumb	1	..	..
Physically Defective ..	84	..	..

* 14 Imbeciles, 3 Idiots, 5 feeble-minded uneducable children, and 1 feeble-minded child discharged from a special school on attaining 16 years of age.

SPECIAL SCHOOLS.—The number of exceptional children admitted to special schools during 1933, *whether examined during that year or previously*, was—Blind 1, Deaf and Dumb 2, Epileptic 1, Mentally Defective 5, Physically Defective 103.

Mental Defectives.—Although 76 children were certified as mental defectives and found suitable for special schools, only four were admitted during the year, thus leaving 72 for whom no special provision was made. The reasons for their non-admission are as follows :—

Parents' refusal	55
Too old	15
Awaiting vacancies	2

The accommodation available is not sufficient for the needs of the County, and would be grossly insufficient if all suitable cases were compulsorily removed. There are at present 17 children in Sandlebridge Special School, 1 at Monyhull Residential School, and 1 at Besford Court Catholic Mental Welfare Hospital from this County.

During the year 1933, the striking feature was the large number of mentally defective children attending the Public Elementary Schools. These to a considerable extent consisted of children who had been certified for a special school, but either their parents objected to their removal or they were considered too defective for admission. These children are now put under systematic supervision of the whole-time school nurses, and at the age of 16 are transferred to the supervision of the Health Visitors, although they cannot be notified formally to the Local Authority under the Mental Deficiency Act.

Physical Defectives.—The more serious orthopaedic cases are admitted to the Orthopaedic Hospital, which is also a special school for physically defective children within the meaning of the Education Act, on the recommendation of the School Medical Officer. The cases are discovered principally by the School Medical Officers and nurses, every effort being made to get the cases as early as possible.

Blind and Deaf Children.—In both these classes of children accommodation in special schools is always found if the parents are willing for removal. Every effort is made to get these children admitted as early as possible.

NURSERY SCHOOLS.—There are none of these schools in the County ; nor does the need for provision appear to be particularly urgent.

CONTINUATION SCHOOLS.—There are no Continuation Schools in the County.

EMPLOYMENT OF CHILDREN AND YOUNG PERSONS.

The children over 12 years of age in private employment come under the notice of the Assistant School Medical Officers at each visit to the Schools.

If a Medical Officer considers that any of these employed children are not in a fit state of health to be employed outside of school hours, the facts are transmitted to the Secretary for Education for appropriate action to be taken.

SECONDARY SCHOOLS.

Medical inspection is carried out in 16 of the 18 Secondary Schools in the County. Five of the Secondary Schools are Aided Schools ; and of these Aided Schools three undergo medical inspection. As five of the Secondary Schools, namely, Bishop's Castle, Cleobury Mortimer, Bridgnorth Grammar, Coalbrookdale High School and Market Drayton Grammar School are mixed schools, they have to be inspected by male and female medical officers. An effort is made to carry out an inspection in each school every term, and with the exception of eight inspections cancelled owing to the extremely small number of scholars due for examination, this has been done. The number of children in attendance in Secondary Schools in the County in September, 1933, was 3,363, and the number of children on the registers of those secondary schools which undergo medical inspection was, on that date, 2,926.

No general arrangements have been made by the Local Education Authority for providing treatment for children attending Secondary Schools in whom defects are found at routine medical inspections. If, however, a free place scholar is found to be in need of treatment for a visual defect and the parents are unable to secure the necessary treatment, the Local Education Authority undertake to provide facilities. In addition, dental inspection is carried out in Secondary Schools as in the case of Elementary Schools, and free dental treatment is provided for those scholars who have free places. The Orthopaedic After-care Centres are, of course, available for scholars from Secondary Schools just as for Elementary School children, but the Local Education Authority does not undertake to provide beds in the Orthopaedic Hospital in the case of the former. The parents of Secondary School scholars are not visited by school nurses, as is the case in Elementary Schools, in order to point out the necessity for treatment and urge the parents to take immediate steps to obtain it, and the whole question of securing treatment is left in the hands of the Head Masters and Head Mistresses, who write to the parents regarding any children for whom treatment has been advised by the medical inspectors.

The children who undergo routine medical examination at the visit of the medical inspector are entrants, children aged 12 and 15, and leavers. In addition, re-examination is carried out in the case of those children in whom some defect has been found at a previous examination, and progress is recorded on a treatment card till further examination on account of defects found is no longer indicated. The head master or head mistress also brings forward for special examination any children, not included in the groups mentioned above, in whose case there seems to be a condition or defect requiring medical attention.

Amongst Secondary School children treatment for defects of the grosser type is more readily obtained by the parents than amongst Elementary School children, but when a defect is of the minor type, a large number of those discovered in Secondary School children go untreated. This last is probably to be attributed partly to the fact that, after a medical inspection in an Elementary School, the homes of the children in whom defects have been found are visited by the school nurses, who point out to the parents the necessity for obtaining treatment at the earliest possible moment, and partly to the fact that facilities for treatment of children in attendance at elementary schools are provided by the Local Education Authority. As, however, about half of the children in attendance at Secondary Schools have free places, and therefore come from substantially the same class of home as the children in Elementary Schools, the considerations which make desirable the provision of treatment under County Council Schemes for children in attendance at Elementary Schools apply with at least equal force to about 50 per cent. of the children in attendance at Secondary Schools.

Below is given in tabular form particulars of the children examined by the medical inspectors.

A.— ROUTINE MEDICAL INSPECTIONS.

Age	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	Total.
Boys	1	1	4	8	9	62	127	161	33	30	155	18	16	18	11	..	654
Girls	9	7	5	5	8	75	123	239	39	39	160	36	31	24	3	1	804
Totals for 1933			..	10	8	9	13	17	137	250	400	72	69	315	54	47	42	14	1	1458
Totals for 1932			..	8	7	10	20	35	116	268	409	68	76	316	52	41	28	10	..	1464

RE-EXAMINATIONS.

Boys 509
Girls 820

SPECIAL EXAMINATIONS.

4
43

TOTAL.

513
863

Totals for 1933.. 1329

Totals for 1932.. 1197

47
43

1376
1240

DEFECTS FOUND AND TREATMENT RECEIVED.

On page 41 are tables giving details of defects found, requiring either observation or treatment; and below is given in convenient form for reference a summary of the defects, with a statement of the number of children found during the year by the medical inspectors to have obtained treatment for defects discovered at previous examinations.

	Defective Eyesight.	Tonsils & Adenoids.	Ear Conditions.	Skin Disease.	Orthopaedic Defects.	Other Conditions.	Total.
Defects discovered	121	17	7	9	71	54	279
Defects treated	170	15	14	10	238	4	451

Of the above conditions, the only one for which the Local Education Authority undertakes to provide treatment, and that only when the parent is unable to arrange for treatment himself, is the defect of eyesight.

During the year, 34 cases were dealt with under the scheme of the Local Education Authority, 111 through private practitioners or hospitals, and 25 otherwise.

Spectacles were prescribed and obtained in 141 cases, 28 under the Local Education Authority's scheme and 113 otherwise.

DENTAL INSPECTION AND TREATMENT.

All the schools in which medical inspection is carried out are visited by the Dental Officers, and all the scholars are inspected at each visit. Only those scholars, however, who have free places receive treatment under the scheme of the Local Education Authority. The parents of the other scholars are advised to obtain the necessary treatment through the agency of private dentists.

Two schools were not visited during the year, one school was inspected during 1932, but the treatment was not carried out until 1933, and in 13 school inspection and treatment were carried out once.

The findings of the School Dental Officers are given in the tables below, in which the condition of the mouths of free placers, fee paying and elementary school children are compared.

AVERAGE NUMBER OF DECAYED TEETH PER CHILD.

Age	..	7 and under.	8	9	10	11	12	13	14	15	16	17	18	Total
Free-placers			2.0	1.7	1.8	2.4	2.9	3.5	3.8	4.0	4.7	2.8
Fee-paying	3.2	3.1	2.5	2.1	2.0	2.1	2.6	3.1	3.8	4.1	5.4	2.9
Elementary		3.3	2.8	2.3	1.9	1.8	1.9	2.2				2.3

PERCENTAGE FREE FROM CARIES.

Age	..	7 and under.	8	9	10	11	12	13	14	15	16	17	18	Total.
Free-placers			17	34	30	18	17	19	8	13	7	21
Fee-paying	21	8	18	33	29	24	21	17	15	12	20	21
Elementary		11	12	17	21	25	24	22				18

It will be seen that, while there is an average of 2.9 decayed teeth amongst the fee-paying children, the average is only 2.8 amongst the free-placers.

On page 42 a statement is given in tabular form of the number of children inspected by the School Dental Officers in Secondary Schools, of the findings of these inspections, and of the number of free-placers who were actually treated by them. The following are the chief facts :—

	Fee-paying.	Free-placers.
Total No. of inspections	1071	839
No. of children referred for treatment	504	480
No. of children actually treated	—	317

STATISTICAL TABLES—ELEMENTARY SCHOOLS.

TABLE I.—A—ROUTINE MEDICAL INSPECTIONS.

Number of Code Group Inspections—

Entrants	3,527
Intermediates	3,552
Leavers	3,681
Total	10,760

Number of other Routine Inspections .. 0

B.—OTHER INSPECTIONS.

Number of Special Inspections	4,030
Number of re-inspections	12,266
Total	16,296

TABLE II.—A.—RETURN OF DEFECTS FOUND AT MEDICAL INSPECTION IN THE YEAR ENDING 31ST DECEMBER, 1933.

Defect or Disease.						Routine Inspections.		Special Inspections.	
						No. of Defects.		No. of Defects.	
						Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.
(1)						(2)	(3)	(4)	(5)
Malnutrition						2	547	5	4
Uncleanliness						589	..	6	..
Skin	Ringworm—								
	Scalp					4	..	..	..
	Body					2	..	2	..
	Scabies					7	..	5	..
	Impetigo					11	..	4	..
§Eye	Other Diseases (non-tubercular)					27	1	1	..
	Blepharitis					28	11	1	2
	Conjunctivitis					20	..	2	..
	Keratitis .. .. .					..	..	1	..
	Corneal Opacities					1	1	..	..
Ear	Defective Vision (excluding Squint					424	119	68	6
	Squint					83	9	9	5
	Other Conditions					8	2	2	..
	Defective Hearing					12	7	4	2
	Otitis media					41	4	4	..
Nose and Throat	Other ear diseases					1	1	..	..
	Enlarged tonsils only					204	742	19	34
	Adenoids only					46	53	8	3
	Enlarged tonsils and adenoids					141	80	16	10
	Other conditions					21	22	7	6
Enlarged Cervical Glands (non-tubercular)						6	236	1	14
Defective speech .. .. .						..	79	..	2
*Teeth, Dental Diseases.. .. .						421	..	24	..
Heart and Circulation.	Heart Disease—								
	Organic					2	69	1	2
	Functional .. .. .					..	41	..	1
Lungs	Anaemia					15	23	1	5
	Bronchitis					16	31	1	4
	Other non-tuberculous diseases					5	12	1	2
Tuberculosis	Pulmonary—								
	Definite					1	..	..	..
	Suspected					6	..	..	..
	Non-pulmonary—								
	Glands.. .. .					18	2	3	..
	Spine					2	..	1	..
	Hip .. .. .					..	..	..	..
	Other bones and joints					4	..	..	..
	Skin					2	..	..	..
Nervous System	Other forms					4	1	..	..
	Epilepsy					2	4	2	2
	Chorea					3	3	2	..
	Other conditions					1	5	..	1
	Rickets					15	30	4	10
Deformities	Spinal Curvature					28	23	3	..
	Other forms					175	49	29	3
Other defects and diseases						123	758†	12	87‡

§ In addition there were 225 "Routine" and 6 "Special" cases of defective vision which had been corrected by glasses at the time of examination.

* This only includes the grosser cases requiring immediate treatment, others being left over for routine treatment by the School Dental Officer.

† Includes 545 Dull and Backward Children.

‡ Includes 36 Dull and Backward Children.

**B.—NUMBER OF INDIVIDUAL CHILDREN FOUND AT ROUTINE MEDICAL INSPECTION TO REQUIRE TREATMENT
(EXCLUDING UNCLEANLINESS AND DENTAL DISEASES).**

Group. (1)	Number of Children.		Percentage of children found to require treatment. (4)
	Inspected. (2)	Found to require treatment. (3)	
Code Groups :—			
Entrants	3527	423	12.0
Intermediates and other Routine inspections	3552	517	14.6
Leavers	3681	451	12.3
Total (Code Groups)	10760	1391	12.9

TABLE III.

RETURN OF ALL EXCEPTIONAL CHILDREN IN THE AREA AT THE END OF 1933.

(No child is entered under more than one heading).

Children suffering from Multiple Defects.

Blindness (NOT Partial Blindness).

Deafness (NOT Partial Deafness).

Mental Defect.

Epilepsy.

Active Tuberculosis.

Crippling.

Heart Disease.

Eight children were found to be suffering from combinations of the above defects.

Blind Children.

At Certified Schools for the Blind.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
7	7

Partially Blind Children.

At Certified Schools for the Blind.	At Certified Schools for the Partially Blind.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
1	1	9	..	2	13.

Deaf Children.

At Certified Schools for the Deaf.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
14	2	..	1	17

Partially Deaf Children.

At Certified School for the Deaf.	At Certified Schools for the Partially Deaf.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
2	5	7

Mentally Defective Children.

(FEEBLE-MINDED CHILDREN).

At Certified Schools for Mentally Defective Children.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
18	132	9	66	225

Epileptic Children.

CHILDREN SUFFERING FROM SEVERE EPILEPSY.

At Certified Special Schools.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
3	11	14

Physically Defective Children.**A.—Tuberculous Children.****I.—CHILDREN SUFFERING FROM PULMONARY TUBERCULOSIS.**

(Including pleura and intra-thoracic glands).

At Certified Special Schools.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
..	..	13	8	21

II.—CHILDREN SUFFERING FROM NON-PULMONARY TUBERCULOSIS.

At Certified Special Schools.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
8	69	10	53	140

B.—Delicate Children.

At Certified Special Schools.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
3	137	..	31	171

C.—Crippled Children.

At Certified Special Schools.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
12	122	1	44	179

D.—Children with Heart Disease.

At Certified Special Schools.	At Public Elementary Schools.	At Other Institutions.	At no School or Institution.	Total.
..	32	..	25	57

TABLE IV.—RETURN OF DEFECTS TREATED DURING THE YEAR ENDED 31ST DECEMBER, 1933.
TREATMENT TABLE.

GROUP I.—MINOR AILMENTS.

Defect or Disease. (1)	Number of defects treated, or under treatment during the year.		
	Under the Authority's Scheme. (2)	Otherwise. (3)	Total. (4)
Skin—			
Ringworm—Scalp	20	5	25
Ringworm—Body	27	3	30
Scabies	24	2	26
Impetigo	386	1	387
Other Skin Diseases	233	11	244
Minor Eye Defects— (External and other, but excluding cases falling in Group II.)	316	11	332
Minor Ear Defects	186	16	197
Miscellaneous (e.g., Minor injuries, bruises, sores, chilblains etc.)	2258	26	2284
Total	3450	75	3525

GROUP II.—DEFECTIVE VISION AND SQUINT (excluding Minor Eye Defects treated as Minor Ailments—Group I.)

Defect or Disease. (1)	Number of defects dealt with.			
	Under the Authority's Scheme. (2)	Submitted to refraction by private practitioner or at Hospital apart from the Authority's Scheme. (3)	Otherwise. (4)	Total. (5)
Errors of refraction (including Squint) ..	1182	59	39	1280
Other defect or disease of the Eye excluding those recorded in Group I.)	7	..	3	10
Total	1189	59	42	1290

Total number of children for whom spectacles were prescribed :—

(a) Under the Authority's Scheme	924
(b) Otherwise	81

Total number of children who obtained or received spectacles :—

(a) Under the Authority's Scheme	902
(b) Otherwise	79

GROUP III.—TREATMENT OF DEFECTS OF NOSE AND THROAT.

Number of Defects.												Received other forms of Treatment.	Total number treated.
Received Operative Treatment.													
Under the Authority's Scheme in Clinic or Hospital.				By Private Practitioner or Hospital, apart from the Authority's Scheme.				Total.					
(1)				(2)				(3)				(4)	(5)
(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)	(i)	(ii)	(iii)	(iv)		
64	26	275	4	8	1	23	..	72	27	298	4	26	427

(i) Tonsils only. (ii) Adenoids only. (iii) Tonsils and adenoids. (iv) Other defects of the nose and throat.

GROUP IV.—ORTHOPAEDIC AND POSTURAL DEFECTS.

	Under the Authority's Scheme. (1)			Otherwise. (2)			Total number treated.
	Residential treatment with education.	Residential treatment without education.	Non- residential treatment at an orthopaedic clinic.	Residential treatment with education.	Residential treatment without education.	Non- residential treatment at an orthopaedic clinic.	
	(i)	(ii)	(iii)	(i)	(ii)	(iii)	
Number of children treated ..	85	11	1031	..	..	..	1031

GROUP V. DENTAL DEFECTS.

NUMBER OF CHILDREN DEALT WITH.

				AGE GROUPS INSPECTED.											Specials.	Total.
Age ..				Under 5	5	6	7	8	9	10	11	12	13	14			15
East of County	257	662	756	929	938	1038	1047	1080	1092	1038	122	—	85	9044		
(Mr. Birch)																
South of County	177	735	1076	1186	1192	1186	1262	1246	1316	1253	114	3	—	10746		
(Mr. Keenan)																
North of County	160	778	1011	1076	1129	1100	1156	1115	1130	1072	139	—	7	9873		
(Mr. Catchpole)																
Total	594	2175	2843	3191	3259	3324	3465	3441	3538	3363	375	3	92	29663		

				No. of Children Referred for Treatment.											Specials.	Total.	
				Under 5	5	6	7	8	9	10	11	12	13	14			15
East of County	..	..	..	92	344	477	626	594	629	573	568	537	474	45	—	85	5044
South of County	..	..	..	29	287	536	658	722	663	662	608	593	557	42	—	—	5357
North of County	..	..	..	45	405	620	697	718	673	654	536	554	508	66	—	7	5483
Total	..	..	..	166	1036	1633	1981	2034	1965	1889	1712	1684	1539	153		92	15884

(b) Referred for Treatment

(c) Actually treated

15884

11651

NUMBER OF TEMPORARY TEETH DECAYED.

		SAVEABLE.										UNSAVEABLE.											
Age	..	Un- der5	5	6	7	8	9	10	11	12	13	14	Un- der5	5	6	7	8	9	10	11	12	13	14
t of ounty	..	1124	3548	3857	3959	3228	2574	1777	949	413	139	12	166	707	1058	1266	1021	882	625	409	285	113	8
th of ounty	..	240	1450	2033	1919	1439	967	509	285	115	32	—	38	445	851	1035	980	764	610	412	209	105	4
th of ounty	..	226	910	917	543	407	315	178	112	49	14	2	163	1558	2175	2287	1961	1261	930	474	225	88	8
total	..	1590	5908	6807	6421	5074	3856	2464	1346	577	185	14	367	2710	4084	4588	3962	2907	2165	1295	719	306	20

NUMBER OF PERMANENT TEETH DECAYED.

Age	SAVEABLE.											UNSAVEABLE.										
	5	6	7	8	9	10	11	12	13	14	15	5	6	7	8	9	10	11	12	13	14	15
East of County	17	55	267	483	839	991	1125	1389	1467	162	—	0	0	1	5	21	34	78	155	149	37	1
South of County	5	35	117	278	419	613	801	1073	1269	125	4	0	0	12	57	98	190	258	417	642	84	
North of County	12	114	320	768	984	1260	1314	1538	1557	247	—	0	7	22	145	193	277	409	549	674	118	
Total	34	204	704	1529	2242	2864	3240	4000	4293	534	4	0	7	35	207	312	501	745	1121	1465	239	

PARTICULARS OF TIME GIVEN AND OPERATIONS UNDERTAKEN.

No. of Half-days devoted to Inspection.	No. of Half-days devoted to Treatment.	Total No. of Attendances made by the Children at the Clinics. and Schools.	No. of Permanent Teeth		No. of Temporary Teeth.		Total No. of Fillings.	No. of Administrations of General Anaesthetics.	No. of other Operations.	
			Ex-tracted.	Filled.	Ex-tracted.	Filled.			Per-manent Teeth.	Temp-orary Teeth.
East of County. 81	341	4015	216	1968	3800	402	2430	—	1749	454
South of County. 80	334	4342	518	1511	3563	183	1719	—	1500	354
North of County. 81	301	3771	607	1802	4753	26	2004	3	1781	29
Total 242	976	12128	1341	5281	12116	611	6153	3	5030	837

GROUP V.—UNCLEANLINESS AND VERMINOUS CONDITIONS.

- (1) Average number of visits per school made during the year by the School Nurses .. 9.0
- (2) Total number of examinations of children in the schools by the School Nurses .. 101,505
- (3) Number of individual children found unclean 3,035 approx.
- (4) Number of children cleaned under arrangements made by the Local Education Authority 0
- (5) Number of cases in which legal proceedings were taken :—
- (a) Under the Education Act, 1921 0
- (b) Under School Attendance Bye-laws 18

RETURN OF DEFECTS (SECONDARY SCHOOLS).

Defect or Disease.						Routine Inspections.		Special Inspections.	
						No. of Defects.		No. of Defects.	
						Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.	Requiring treatment.	Requiring to be kept under observation, but not requiring treatment.
(1)	(2)	(3)	(4)	(5)					
Malnutrition .. .. .	..	56	..	..			
Uncleanliness	7	..	..	..		
Skin {	Ringworm—								
	Scalp .. .. .	..	..	..		
	Body .. .. .	..	..	..		
	Scabies	2	..	..			
	Impetigo .. .. .	..	..	..		
Teeth {	Other diseases (non-tuberculous)	7	..	..			
	Dental Diseases	101	..	4					
Nose and Throat {	Enlarged Tonsils only	13	56	..					
	Adenoids only	2	..	..			
	Enlarged Tonsils and Adenoids	2	1	..					
	Other conditions	2	3	..					
Enlarged Cervical Glands (non-tuberculous)	..	6	..	..			
Goitre	2	2	..	..			
Eye {	External Eye Disease	8	1	..					
	Defective Vision (including squint)	116	117	5			8		
Ear {	Defective Hearing	2	1	1			..		
	Otitis media	3	2	1			..		
	Other Ear Diseases .. .. .	..	2	..			..
Defective Speech	1	5	..	..			..
Intelligence (backward) .. .. .	..	16	..	..			..
Heart and Circulation	2	19	..	..			1	
Anaemia	2	3	..	..			..
Tuberculosis {	Pulmonary—								
	Definite .. .. .	..	..	..			..
	Suspected	1	1	..			..
	Non-pulmonary—								
	Glands	2	..	..			..
	Spine .. .. .	..	..	..			..
	Hip .. .. .	..	..	..			..
	Other Bones and Joints .. .. .	..	..	..			..
	Skin .. .. .	..	..	1			..	
Lungs {	Other forms .. .. .	..	..	..			..
	Bronchitis .. .. .	..	1	..			..
Nervous System {	Other non-tuberculous diseases	1	3	..			..
	Headache .. .. .	..	..	..			1	
	Signs of Overstrain .. .. .	..	4	..			..
Rheumatism	3	1	..	..			..
Digestion .. .. .	..	1	..	..			..
Deformities {	Spinal Curvature	7	46	1			4		
	Flat Foot	39	62	3			2		
	Other Deformity	21	8	..			..
Other Defects	25	20	4	1					
Remedial Exercises advised	59		2						
Number of individual children found at Routine Inspection to require treatment	236		—						

DENTAL INSPECTION OF SECONDARY SCHOOL CHILDREN.

					Age Groups Inspected.												Total.
					7 and un- der.	8	9	10	11	12	13	14	15	16	17	18 and over	
Age ..	..	..	..	..	24	24	34	61	123	193	234	150	95	66	44	23	1071
Fee-paying ..	..	..	..	..	24	24	34	61	123	193	234	150	95	66	44	23	1071
Free-place ..	..	..	..	..	..	..	..	12	103	159	136	126	129	84	63	27	839
Total ..	..	..	..	..	24	24	34	73	226	352	370	276	224	150	107	50	1910

					No. of Scholars referred for treatment.												Total.
					7 and un- der.	8	9	10	11	12	13	14	15	16	17	18 and over	
Age ..	..	..	..	..									
Fee-paying .. .. .	..	..	..	..	16	13	16	26	57	81	111	78	50	28	18	10	504
Free-place .. .. .	..	..	..	..	..	..	..	7	43	75	67	60	61	43	30	13	399*
Total .. .. .	..	..	..	..	16	13	16	33	100	156	178	138	111	71	48	23	903

*Actually treated (Free-place) 317

PARTICULARS OF TIME GIVEN AND OPERATIONS UNDERTAKEN (SECONDARY SCHOOLS).

No. of Half-days devoted to Inspection.	No. of Half-days devoted to Treatment.	Total No. of Attendances made by the Children at the Clinics and Schools.	No. of Permanent Teeth		No. of Temporary Teeth		Total No. of Fillings.	No. of Administra- tions of General Anaesthetics.	No. of other Operations.	
			Ex- tracted.	Filled.	Ex- tracted.	Filled.			Per- manent Teeth.	Temp- orary Teeth.
Total 20	49	390	117	367	63	0	384	0	368	0